

**MATERIAL SAFETY DATA SHEET**

Product Name: Cyclohexane

CAS No.: 110-82-7

Version: 01

**1. Identification**

**Product Code** : 90014, 90148, 90384, 98109  
**Company Name** : Advent Chembio Private Limited  
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**E-mail** : [info@adventchembio.com](mailto:info@adventchembio.com)  
**WEBSITE** : [www.adventchembio.com](http://www.adventchembio.com)  
**Company Phone Number** : 022-27690837

**2. Composition/Information on Ingredients**

Ingredient	CAS No	Percent
CYCLOHEXANE	110-82-7	98 - 100%

**3. Hazards Identification****Hazard classification****Physical hazards**

Flammable liquids : Category 2

**Health hazards**

Skin corrosion/irritation : Category 2

Serious eye damage/eye irritation : Category 2

Specific target organ toxicity - single exposure : Category 3

Aspiration hazard : Category 1

**Environmental hazards**

Acute hazards to the aquatic environment : Category 2

Chronic hazards to the aquatic environment : Category 2

**Labels elements****Hazard symbol****Signal word** : Danger**Hazard statement** : Highly flammable liquid and vapor.  
Causes skin irritation.  
Causes eye irritation.

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May be fatal if swallowed and enters airways.  
May cause respiratory irritation.  
May cause drowsiness or dizziness.  
Toxic to aquatic life with long lasting effects. .

**Precautionary statement****Prevention**

- : Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep container tightly closed. Ground/bond container and receiving equipment.  
Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not eat, drink or smoke when using this product. Avoid breathing dust/fume/gas/mist/vapors/spray. Wear protective gloves/eye protection/face protection. Use only outdoors or in a well-ventilated area. Wash hands thoroughly after handling. Avoid release to the environment.

**Response**

- : In case of fire: Use water spray, foam, dry powder or carbon dioxide for extinction. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Specific treatment (see this label). Collect spillage.

**Storage**

- : Store at room temperature below 30°C in original packing, keep container tightly closed away from source of ignition, handle at inert atmosphere.

**Disposal**

Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Other hazards which do not result in GHS classification**

- : Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

**4. First Aid Measures****General information**

- : Get medical advice/attention if you feel unwell. If medical advice is needed, have product container or label at hand. Show this safety data sheet to the doctor in attendance.

**Ingestion**

- : Call a physician or poison control center immediately. Do

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- Inhalation** : NOT induce vomiting.  
: Move to fresh air. Get medical attention if symptoms persist .
- Skin contact** : Wash with soap and water. If skin irritation occurs: Get medical advice/attention. Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.
- Eye contact** : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention .
- Most important symptoms/effects, acute and delayed** : Irritating to eyes, respiratory system and skin. Narcotic effect. .
- Indication of immediate medical attention and special treatment needed** : Symptoms may be delayed. Treat symptomatically.

**5. Fire Fighting Measures**

- General fire hazards** : Flammable liquid and vapor.
- Suitable (and unsuitable) extinguishing media**
- Suitable extinguishing media** : Water spray, foam, dry powder or carbon dioxide.
- Unsuitable extinguishing media** : Avoid water in straight hose stream; will scatter and spread fire.
- Specific hazards arising from the chemical** : Vapors may cause a flash fire or ignite explosively. Vapors may travel considerable distance to a source of ignition and flash back. Prevent buildup of vapors or gases to explosive concentrations. Heat may cause the containers to explode.
- Special protective equipment and precautions for firefighters**
- Special fire fighting procedures** : Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. Fight fire from a protected location. Move containers from fire area if you can do so without risk.
- Special protective equipment for fire-fighters** : Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

**6. Accidental Release Measures**

- Personal precautions, protective equipment and emergency procedures** : ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep unauthorized personnel away. Keep upwind. Use personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them.

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- Methods and material for containment and cleaning up** : Eliminate all ignition sources if safe to do so. Take precautionary measures against static discharges. Stop leak if possible without any risk. Use only non-sparking tools. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal .
- Notification Procedures** : Prevent entry into waterways, sewer, basements or confined areas. Stop leak if you can do so without risk. Inform authorities if large amounts are involved.
- Environmental precautions** : Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

**7. Handling and Storage**

- Precautions for safe handling** : DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take precautionary measures against static discharges. Ground/bond container and receiving equipment. . Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Wear protective gloves/protective clothing/eye protection/face protection. Avoid contact with eyes, skin, and clothing. Use only with adequate ventilation. Wash hands thoroughly after handling.
- Conditions for safe storage, including any incompatibilities** : Store at room temperature below 30°C in original packing, keep container tightly closed away from source of ignition, handle at inert atmosphere. Ground container and transfer equipment to eliminate static electric sparks. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of flammable liquids.

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## 8. Exposure Controls Personal Protection

### Control parameters

### Occupational exposure limits

Chemical identity	Type	Exposure Limit values	Source
CYCLOHEXANE	TWA	100 ppm	US. ACGIH Threshold Limit Values (2011)
	REL	300 ppm 1050 mg/m <sup>3</sup>	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	300 ppm 1050 mg/m <sup>3</sup>	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	300 ppm 1050 mg/m <sup>3</sup>	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	300 ppm 1050 mg/m <sup>3</sup>	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	ST ESL	3,400 µg/m <sup>3</sup>	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (12 2010)
	AN ESL	3,40 µg/m <sup>3</sup>	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (12 2010)
	ST ESL	1000 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (12 2010)
	AN ESL	100 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (12 2010)

**Appropriate engineering controls** : No data available.

### Individual protection measures, such as personal protective equipment

**General information** : Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye

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	wash and safety shower must be available in the immediate work area. Use explosion-proof ventilation equipment.
<b>Eye/face protection</b>	: Wear safety glasses with side shields (or goggles) and a face shield.
<b>Hand protection</b>	: Chemical resistant gloves.
<b>Other</b>	: Wear suitable protective clothing.
<b>Respiratory protection</b>	: In case of inadequate ventilation use suitable respirator .
<b>Hygiene measures</b>	: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Provide eyewash station and safety shower .

**9. Physical and Chemical Properties**

<b>Appearance</b>	: Colorless Liquid.
<b>Odor</b>	: Mild
<b>Solubility in water</b>	: Insoluble in water
<b>Relative density</b>	: 0.78 (20 °C)
<b>pH</b>	: No data available
<b>Initial boiling point and boiling range</b>	: 80 °C (101 kPa)
<b>Melting point/freezing point:</b>	: 6.47 °C
<b>Vapor pressure</b>	: 12.9 kPa (25 °C)
<b>Vapor density:</b>	: 2.98 AIR=1
<b>Formula</b>	: C <sub>6</sub> H <sub>12</sub>
<b>Molecular Weight</b>	: 84.16 g/mol

**10. Stability and Reactivity**

<b>Reactivity</b>	: No dangerous reaction known under conditions of normal use.
<b>Chemical stability</b>	: Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	: Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	: Heat, sparks, flames.
<b>Incompatible materials</b>	: Strong oxidizing agents.
<b>Hazardous decomposition products</b>	: Thermal decomposition may release oxides of carbon.

**11. Toxicological Information****Information on likely routes of exposure**

<b>Ingestion</b>	: May be harmful if swallowed.
<b>Inhalation</b>	: May cause irritation to the respiratory system. May cause

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drowsiness or dizziness.  
**Skin contact** : Causes skin irritation .  
**Eye contact** : Causes eye irritation .

**Information on toxicological effects****Acute toxicity (list all possible routes of exposure)**

**Oral Product** : LD 50 (Rat): 29,820 mg/kg  
LD 50 (Mouse): 1,300 mg/kg  
**Dermal Product** : No data available.  
**Inhalation Product** : No data available.  
**Repeated dose toxicity Product** : No data available.  
**Skin corrosion/irritation Product** : Causes skin irritation  
**Serious eye damage/eye irritation Product** : Causes eye irritation.  
**Respiratory or skin sensitization Product** : Not a skin sensitizer.  
**Carcinogenicity Product** : No data available .  
**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans** : No carcinogenic components identified .  
**US. National Toxicology Program (NTP) Report on Carcinogens** : No carcinogenic components identified  
  
**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050 Germ cell mutagenicity** : No carcinogenic components identified  
**In vitro Product** : No mutagenic components identified.  
**In vivo Product** : No mutagenic components identified.  
**Reproductive toxicity Product** : No data available.  
  
**Specific target organ toxicity - single exposure Product** : Inhalation - vapor: Narcotic effect., Respiratory tract irritation.  
  
**Specific target organ toxicity - repeated exposure Product** : No data available.  
**Aspiration hazard Product** : May be fatal if swallowed and enters airways.  
**Other effects** : None known.

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**12. Ecological Information****Ecotoxicity****Acute hazards to the aquatic environment :**

- Fish Product** : No data available.
- Specified substance(s):** LC 50 (Bluegill (*Lepomis macrochirus*), 96 h): 24.99 - 44.69  
CYCLOHEXANE mg/l Mortality  
LC 50 (Fathead minnow (*Pimephales promelas*), 96 h):  
3.961 - 5.181 mg/l Mortality .
- Specified substance(s):** EC 50 (Water flea (*Daphnia magna*), 96 h): 96 - 175 mg/l  
CYCLOHEXANE Intoxication .
- Aquatic invertebrates Product** : No data available.

**Chronic hazards to the aquatic environment :**

- Fish Product** : No data available.
- Aquatic invertebrates Product** : No data available.
- Toxicity to Aquatic Plants** : No data available.
- Product:**
- Persistence and degradability**
- Biodegradation Product** : The product is not readily biodegradable.
- BOD/COD ratio Product** : No data available.
- Bioaccumulative potential**
- Bioconcentration factor (BCF) Product** : No data available on bioaccumulation.
- Partition coefficient n-octanol / water (log Kow) Product** : Log Kow: 3.44
- Mobility in soil** : The product is insoluble in water and will spread on the water surface.
- Other adverse effects** : Toxic to aquatic life with long lasting effects .

**13. Disposal consideration**

- Disposal instructions** : Discharge, treatment, or disposal may be subject to national, state, or local laws. Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
- Contaminated packaging** : Since emptied containers retain product residue, follow label warnings even after container is emptied.



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## 14. Transport Information

	UN No.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
<b>DOT</b>	UN 1145	Cyclohexane	3	II	No
<b>IMDG</b>	UN 1145	Cyclohexane	3	II	No
<b>IATA</b>	UN 1145	Cyclohexane	3	II	No

## 15. Regulatory Information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Safety, health and environmental regulations/legislation specific for the substance or mixture  
 No Data Available.

## 16. Other Information

### *NFPA Hazard ID*



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

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